In the Abstract:

Please cancel the abstract of the disclosure as filed, and replace with the following:

The invention includes a method of processing an image belonging to a sequence of at least two images IM(t1), IM(t2) displaying a surface representing an organ or part of an organ which is deformable over time and called the organ surface. The organ surface is arranged include characteristic points, denoted marking points MP, which correspond to each other from one image to another in the sequence. The method also includes defining a structure per unit length, $LS(t_1)$, whose deformation is to be followed on an image $IM(t_1)$, a step CALC of calculating the positions of the marking points MP(t1) and MP(t2), and a step DET of determining the parameters of an explicit mathematical expression f(t1/t2) of the deformation of the organ observed between the two images. The determination is carried out from the positions of a set MP' of marking points on the two images. The expression f(t1/t2) is then applied to the structure per unit length LS(t1) to define the form of the structure per unit length LS(t2) after deformation of the organ between the two images.